St. Louis County, Minn. Welfare Board
Dental Care Program

St. Louis Co., Minn. Welfare board.

THE DENTAL CARE PROGRAM
OF THE WELFARE BOARD
OF ST. LOUIS COUNTY, MINNESOTA

I. SCOPE OF THE SURVEY

A survey of provision for dental care of relief clients and other beneficiaries of public funds was made in St. Louis County in conjunction with the medical care study. This survey consisted largely of the collection of data on; expenditures for dental care, average number of persons dependent on public funds for dental care, amount and types of dental service dispensed, facilities for providing dental service, and rules, regulations and physical set-up under which dental care for relief clients is administered.

Inasmuch as the number of persons eligible for dental care is known for certain relief categories, an annual per capita rate of expenditure can be determined. However, since no figures are available on the exact amount of professional dental services needed by the population under consideration, an accurate measure of the effectiveness with which these needs are being met cannot be obtained. By regulation, dental fillings are provided for children only, yet services, including extractions, are not classified according to age groups or by type of tooth serviced; and consequently estimates of needs based on findings in other population groups are of limited value. Thus, this presentation is largely reduced to a report of the findings in each category referred to in the first paragraph and a comparison of findings for the various relief groups. Caution must be exercised, therefore, that the author's impressions and opinions be not interpreted as facts resulting from the analysis of these data.

A PRELIMINARY REPORT
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II. SUPERVISION OF THE DENTAL CARE PROGRAM

The part time services of a county dental health officer are available to the St. Louis County Welfare Board. His duties consist of general supervisory direction over the dispensation of dental care to relief clients. In addition, clinical facilities in Hearding Hospital in Duluth and in Buhl Hospital on the Range are available for his use in rendering some dental service, such as extractions and making dental roentgenograms. His duties as county dental health officer include giving limited extracting and filling services to grade school pupils in rural areas of the county. The rules and procedures under which expenditures for dental care are justified and authorized are given in the appendix, pages 1 to 10 inclusive. Duluth is a first class city and therefore the examiner system was used as presented in the appendix, page 2. The dentist employed by the St. Louis County Welfare Board acted as examiner for this area. The rural portion and other urban centers of the county, known as the Range, used the non-examiner plan as given in the appendix, page 2.

III. THE OBJECTIVES OF A DENTAL CARE PROGRAM

Before proceeding to a presentation and discussion of the findings of this survey, it seems desirable to review briefly the facts regarding the hazards to dental health and what can be done to eliminate or reduce these hazards. Further, with limited funds available, what is the most logical manner to expend those funds in order that the dental health status of those dependent on public funds for dental care may be improved and dental ill health reduced to a minimum?

There are two diseases or diseased conditions, dental caries and pyorrhea, which cause most dental ill health. The first of these, dental caries, is the principal hazard to dental health in children and young adults under age 30, whereas the latter, pyorrhea, is the principal hazard in persons aged 30 and over. Inasmuch as the loss of teeth from dental caries, shifting of the remaining teeth, and the

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malocclusion resulting therefrom are major precursors of the condition known as pyorrhea, it appears logical that the problem of eliminating or reducing the deleterious effects of dental caries be given precedence.

The cause of dental caries is not completely known and as yet there is no known practical means of preventing this disease. It is an established fact, however, that the treatment of early carious lesions by the proper placement of chemically and physically stable filling materials will prevent or indefinitely postpone the extension of the carious process to pulp involvement and tooth death.

Since dental caries is a chronic disease, the defects produced by it are cumulative in the absence of regular dental care. Further, the complexity and cost of the reparative or replacement services required to correct dental defects or deficiencies increases as the period of neglect increases. For example, the filling of a cavity in a tooth or the treatment of early pyorrhea are relatively simple, inexpensive operations which are highly successful in saving teeth, whereas the replacement of teeth by bridges, by partial plates, or by full dentures, or the treatment of advanced pyorrhea, are complex, expensive operations. It should be the aim, therefore, of County Welfare Boards to provide dental services for their beneficiaries in such a manner that funds will be expended largely for saving teeth and thus preventing the need for subsequent expenditures for emergency extractions and for major and costly replacement services.

Obviously, the emergency dental needs of any population group should receive first consideration when allocating dental funds for dental care. Such emergency needs would constitute services for the relief of pain, removal or treatment of septic conditions, treatment of acute dental diseases such as Vincent's infection, and treatment of fractures of the jaws and teeth. However, since extractions constitute the major portion of emergency dental needs, and since the need for extraction service is a result of neglected carious teeth or advanced pyorrhea, the ratio of funds expended for extraction service to funds expended for filling service or treatments to prevent the need for extractions may be used as a crude index of

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the completeness with which dental needs are being supplied.

IV. SURVEY FINDINGS

A. Dental Services Provided for Relief Clients

Data on dental care provided for relief clients of the St. Louis County Welfare Board are presented in Tables I, II and III according to relief classification. Table I presents the data on that relief group classified as direct relief. The number of dental services and the expenditures for dental care are given by type of service for each relief area for St. Louis County.

An examination of the number and costs of the various types of dental services indicates that extractions and fillings constitute the major portion of dental care provided for direct relief clients. Marked differences in the ratio of expenditures for these two particular services according to area will be noted. For example, all Duluth branches expended roughly three times as much for fillings as for extractions. On the other hand, all other branches, that is the Range areas, expended more funds for extraction services than for filling services.

On the assumption that the filling of carious teeth is a constructive dental health service and that the extraction of teeth is an indication of a deficiency in provisions for such service, these comparisons might lead to the conclusion that the Duluth area is rendering a higher quality of dental service for relief clients than the Range area. However, since dental services are supplied by school boards of almost all Range schools, the filling services provided for Range children in families on direct relief are largely excluded from these data, whereas those for Duluth children in this category are included. Inasmuch as it is a general policy of the Welfare Board to attempt to expend funds equally between the Range and Duluth areas, and since it is an expressed policy of that Board to limit filling services to children and provide emergency treatment only for adults, a more logical conclusion might be that extraction service is more completely provided for direct relief clients on the Range than for those in the Duluth sector.

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The average number of persons eligible for direct relief being known, it is possible with the data on expenditures for dental care to determine the per capita expenditure for this type of health service. These findings are also presented in Table I. The per capita expenditure for persons on direct relief in St. Louis County is $1.15. In general, the per capita rates for individual branches are fairly uniform, with the exception of that of Southern Rural Duluth which is slightly less than half the figure for the County, and with the marked exception of the Ely rate which is only $0.15. The specific reason for the discrepancies noted is not known.

Table II presents the findings on dental services and costs for Old Age Assistance cases. Funds for dental care for this group are provided largely by grants-in-aid. The types of service rendered are largely restricted to full dentures, repair of dentures, and extractions. Because of the edentulous or nearly edentulous character of persons in the age group eligible for old age assistance, the dental needs of this group would consist chiefly of the replacement services. A per capita expenditure of $0.72 for dental care for individuals in this category is undoubtedly far below the average cost of servicing their actual dental needs. However, in view of the experience that a liberal policy in supplying full dentures for persons in this age group sponsors complaints and unreasonable requests for re-makes, it seems desirable to be highly selective and stringent in making such services available. Further, prosthetic dentistry is relatively expensive and therefore expenditures for this type of service should be confined to supplying the needs of such clients who may be rehabilitated by it for useful and productive work. Although the per capita rate of expenditure for the Range branches is again decidedly below that for the Duluth branches, the conclusion does not follow that the Range is more lax in providing needed service. It is known that the Range town and school boards are providing gainful employment of short duration to those cases needing and desiring full dentures.

The number of eligible individuals in the category of Aid to Dependent Children includes the mothers as well as the dependent children. In addition, some older children not strictly eligible for aid in this relief category are included under the St. Louis County system of accounting for Aid to Dependent Children Supplements. These facts must be taken into consideration in attempting to interpret the figures on dental care for this group as presented in Table III.

An examination of the costs by type of service (Table III) indicates that the Duluth area expended more than ten times as much for fillings as for extractions in providing care for the Aid to Dependent Children clients. The direction and extent of this ratio is highly desirable. This ratio is reduced to slightly more than two to one for the Range area, but dental care facilities provided for school children in this area must again be considered in attempting to explain this difference as well as the marked difference in the per capita rate of expenditure which is $1.90 for Southern St. Louis County and only $0.81 for Northern St. Louis County.

The relatively high per capita expenditure for dental service for the Aid to the Blind group in the Duluth or Southern St. Louis County area (Table IV) appears to be due to the large per capita expenditure for artificial dentures. Inasmuch as the cost for this type of service is relatively high and the population is small, supplying a few dentures is likely to give the false impression that the dental needs of this group are more completely supplied than those of the relief groups previously discussed. The reason for a low per capita rate of expenditure for the blind of Northern St. Louis County is unknown. It is certainly logical to assume that the dental needs of the thirty-one cases in this area are not supplied by one new denture.

The total number of dental services and expenditures for dental care by type of service for all relief and assistance groups is presented in Table V. Almost half of the somewhat less than sixteen thousand teeth filled or extracted were extracted. Since the average per capita expenditure for all groups is $1.10 and since this figure is about one-fifth of the estimated cost of caring for the annual per

capita increment of dental defects, the ratio between extractions and fillings, though decidedly unfavorable, is in line with the expected. However, factors which influence the nature of these data have been considered in presenting the findings for the individual relief groups. These discourage drawing conclusions with confidence.

B. Dental Services Provided for Non-Relief Clients

Data on dental care for non-relief groups provided through the St. Louis County Welfare Board are presented in tables VI, VII, VIII, and IX. These groups constitute certain classes of individuals who are completely or partially dependent on public funds for assistance in caring for their dental needs and for those of the dependent members of their families. Since, in addition to the shortcomings of the data previously presented, the average number of individuals in the non-relief classifications is not known, these data will be presented merely to indicate the relative size of expenditures for dental care for these groups as compared with that for the relief groups.

Table VI presents figures on dental service given as supplemental aid to W.P.A. workers and dependent members of their families. That a large proportion of the service provided for this group is provided for children is evident from the finding that in the Duluth areas two to three times as many teeth have been filled as extracted. This conclusion is based on the fact that filling services are limited by regulation largely to children. Again the ratio between filled and extracted teeth is less favorable in the Range sector. It is noteworthy that the St. Louis County Welfare Board expends more than $7,000 for the dental care of W.P.A. clients.

Table VII is concerned with data on dental services provided for certain non-relief individuals who are certified as being dependent on the facilities of the Welfare Board for medical services only.

Table VIII is concerned with similar data for a group of miscellaneous cases such as farm relief clients, seamen's relief, some Veterans, State and Federal homeless, etc. These are grouped because they are few in number and separate tables

did not seem warranted.

Table IX, Dental Costs and Services for Care of Children, is concerned with a non-relief group consisting of orphans, illegitimate children, feebleminded, etc., who through the development of unusual circumstances may be temporarily dependent on the Welfare Board for needed dental services.

C. Total Dental Services Provided for Relief and Non-Relief Clients

The total expenditures and detailed data on dental care for the non-relief groups are summarized in Table X. The totals for both relief and non-relief groups are presented in Table XI. A comparison of the findings in these two tables indicates that of all expenditures for dental care for both relief and non-relief groups (Table XI), slightly more than a fourth is expended as aid or supplements to non-relief groups (Table X). Since the cost of dental care for persons in the non-relief classification is largely supplemental aid to W.P.A. workers, these comparisons indicate that the dental care problem of W.P.A. personnel is one of major concern to Welfare Boards.

D. Dental Services Provided by Institutions and Private Social Agencies

Table XII presents data on dental services provided by institutions and private social agencies. Nopeming, the St. Louis County Tuberculosis Sanatorium, is the only institution in the County which maintains and operates a dental clinic for its patients. The dental clinic in Miller Hospital, Duluth, is operated and supported by the Community Fund. The dental clinics in Hearding Hospital and Buhl Hospital are operated part-time by the dentist employed by the Welfare Board. The private social agencies are all Duluth organizations which operate for the welfare of Duluth residents only. They represent a source of dental care which does not exist as such in the Range sector of the County. The expenditures for dental services by these agencies were largely for the dental care of the so-called "borderline cases." However, many of the new dentures supplied were supplied for relief cases who were referred to these agencies by the Welfare Board.

Slightly more than $10,000 was expended for dental care by Nopeming and the private social agencies. Of this amount, $6,500 was expended by the private social agencies. Although this largely represents an added source of dental care for non-relief cases in Duluth, yet Southern St. Louis County expended a greater proportion of its dental funds for the care of non-relief cases than did Northern St. Louis County. Figures presented in Tables X and XI are used to make this comparison.

	Southern	Northern
Relief	$14,876.11	$ 9,671.11
Non-relief	5,576.67	3,133.49
Totals	$20,452.78	$12,804.60
Per cent Non-relief	27.2	24.5

E. Dental Services Provided by School Boards for School Children

The volume and kinds of dental services provided for grade school children through dental clinics or dental programs under the jurisdiction of school boards are given in Table XIII. Whereas Duluth school children receive dental examinations only, children in the first six grades of almost all schools in urban centers on the Range are eligible for filling and extraction services. The differences in eligibility requirements set up by the school boards of these towns are also given in Table XIII. Roughly, $25,000 was expended for salaries and supplies, exclusive of equipment, to operate these clinics. Only $3,000 of this amount was spent for school clinic services for Duluth children and that service was limited to dental examinations. The number of children who would have been dependent on welfare funds for dental care but who received dental services in the school clinics in Northern St. Louis County is not known. However, the fact that this important source of dental care for children of welfare clients on the Range exists, and the fact that services received from this source are omitted from the Welfare Board's records on dental services and costs, are considerations which seriously affect the comparability of the figures available for Northern and Southern St. Louis County.

F. Total Expenditures for Medical and Dental Care

Table XIV, Dental and Medical Expenditures, St. Louis County Welfare Board, July 1, 1939 - June 30, 1940, presents data which indicates the relative costs of dental services provided for the different classes of recipients and also the relative proportion of expenditures for all health services which were dental. Only 7.7 percent of all medical and dental expenditures were dental. It is usually estimated that the cost of adequate dental care is about 20 percent of the total cost of medical and dental care. For the Aid to Dependent Children group, 17.4 percent of the total expenditures for medical and dental care were dental. However, the total per capita expenditure for this group was comparatively low. Similarly, in the non-relief groups, 18.1 percent of the total expenditures for medical and dental care of persons in the Care of Children category were dental. These figures undoubtedly reflect the more liberal provisions for dental care for children than for adults. They are, however, largely influenced by the relative amount spent for medical care.

V. GENERAL DISCUSSION

A. Records of Dental Services and Costs

The outstanding characteristic of these data on dental services provided for beneficiaries of the St. Louis County Welfare Board is the fact that they are of little value for purposes of measuring the success of the dental care program in attaining its objectives. Although the average number of eligible persons is given for each of the relief classifications, the proportion of each of these groups which is eligible for adequate dental care (children) and the proportion which is eligible for emergency care only (adults) is not known. For example, figures on dental services provided for the Aid to Dependent Children group for Southern St. Louis County (Table III) show that 392 teeth were extracted and 1997 teeth were filled. However, since the mothers and some older children are included in this group, it is not known how many of the 2098 eligible persons were children eligible for fillints to prevent tooth loss nor is it known how many of the 392 extractions represent a

failure to prevent tooth loss in these children.

If it could be assumed that all fillings were for children and almost all extractions were for mothers, then it is obvious that per capita filling rates and extraction rates based on the total eligible population would be diluted, and the degree of dilution would be unknown. The per capita cost figures which are given in the Tables for the relief groups are characterized by this same weakness. Further, if some of the extractions were for children, as can be logically assumed, how many were permanent teeth and how many were deciduous teeth? The answers to these questions would afford data which are essential for purposes of appraisal, since the extraction of deciduous teeth about to be exfoliated is of far less significance from a dental health standpoint than the extraction of permanent teeth.

Consistent differences were noted in both volume and types of dental services dispensed by Northern and Southern St. Louis County. However, the marked differences in the means and methods employed by these two divisions of the County for providing the accounting for dental services make it difficult to interpret the precise meaning of the results of these comparisons. By and large, these data constitute a statement of dental services rendered and costs. Because of the many known variables which influence these figures, detailed comparisons, either internal, or between different classes of beneficiaries, or between relief areas, do not seem justifiable. Similar statements for previous and for subsequent fiscal years would probably afford data which would be of value in making some of these comparisons.

B. Administrative Policies

One of the major specific purposes of a dental care program is to prevent tooth loss, that is, to keep teeth alive, and in position for the performance of their normal functions. Data presented in Table XI, Dental Services and Cost for All Relief and Non-Relief Clients, show that 10,838 teeth were filled and 10,717 teeth were extracted. It is obvious that this one to one ratio between filled and extracted teeth must be drastically altered before the dental care program can be considered successful. The ratio of 5 fillings to 1 extraction for the Aid to Dependent

Children group (Table III) is the most favorable indication of a trend in the proper direction. However, the fact that probably more than two-thirds of the beneficiaries of the Welfare Board were eligible for emergency services only, whereas the remaining third or less were the only ones eligible for services which prevent the loss of teeth, must be considered in interpreting the meaning of the present over all ratio of extractions to fillings. Certainly the proportion of welfare cases eligible for adequate dental services must be increased, though gradually, to include all age groups, if tooth loss is to be reduced to an irreducible minimum.

C. Supervision

Changes in administrative policies or additions to record forms usually place an added load of responsibility on the existing administrative personnel. This is especially true where a premium has been placed on simplicity of administration and where records are kept for accounting purposes only. However, if the job of supervising the dental care of from 25,000 to 50,000 people is to be handled with a working plan with precise objectives, then records which will provide data whereby the success in attaining those objectives can be measured seem essential.

In addition to the need for more supervision of records, there appears to be a need for more general supervision of the dental care program in the St. Louis County. Apparently the supervision given this program in Duluth, where the examiner system is used, has been of considerable value to both the dentally needy and the Welfare Board. The need for this same type of supervision on the Range seems obvious - not obvious from the results of the figures presented in this paper but from the standpoint of carrying out a definite dental care program plan.

Since the Welfare Board of St. Louis County is largely responsible for the medical and dental care of the medically needy, regardless of relief status, the cooperation of all groups and organizations interested in the health problems of the community must be sought and their efforts coordinated. Coordinating the efforts which are of a dental health character is a major responsibility of the dental supervisor. This view is based on the assumption that the dental needs of those classi-

fied into various relief categories are of no greater importance to the dental health status of a community than those of individuals who have not been so classified but who cannot afford to purchase dental care for themselves and their dependents.

This review of some of the general duties of the part-time dental supervisor of the dental care program of the St. Louis County Welfare Board has been made to support the opinion that his responsibilities are of such magnitude as to suggest that the present supervisor be placed on a full-time basis or that a part-time assistant be assigned to him.

A brief discussion of several minor administrative problems will be presented in a subsequent section of this paper under "Summary and Recommendations."

D. Planning a Dental Care Program

If Welfare Boards had sufficient funds to provide complete dental services for all their beneficiaries for a given year, then the cost of continuing to render such complete service for each subsequent year would be only a small fraction of the cost for the first year. This is true because complete services for the first or given year would include reparative services for dental defects which have been accumulating and increasing in complexity over a period of many years of neglect, whereas care for each of the following years would consist almost solely of servicing the simple new defects accruing within a single year's time.

Inasmuch as most Welfare Boards do not have sufficient funds available to care for all the present dental needs of their clients, they should attempt to reach the goal of having only one year's increment of dental defects to care for by a systematic approach to the problem over a period of several years. Supposedly, the present policy of the St. Louis County Welfare Board of limiting filling services to children is based on this approach. However, if this present policy is being used as an approach to the problem, and has not become a permanent administrative policy, then the age scale of that group for whom filling services are provided will be increased annually. At the beginning of each new fiscal year an older age group becomes eligible for filling services, until eventually the entire age scale is in-

cluded. It must be remembered that the dental health of children is not more important, per se, than that of adults.

Although defects accumulate in the deciduous teeth in the same manner as they do in the permanent teeth, they begin to accumulate at a younger age level. Therefore, it would seem desirable to attack the dental service problem of a given population group from the standpoint of deciduous and permanent teeth rather than from a children-adult basis.

Under a permanent-deciduous teeth plan, funds in excess of those needed to care for emergency needs would be first allocated to caring for defects in the permanent teeth of those clients who have accumulated defects in these teeth over the shortest span of time. Obviously children aged 6 whose permanent teeth are just beginning to erupt would best satisfy this requirement. Children aged 7 would be second in order, childred aged 8 would be third, and so on throughout the age scale. However, adults or persons of any age who, through regular dental care or through the absence of dental disease have maintained a satisfactory complement of teeth, would also receive primary consideration when dispensing filling services to prevent tooth loss and to maintain dental health at a minimum cost.

When the filling needs for the permanent teeth of all relief clients have been reduced to the yearly crop of new defects in these teeth, excess funds would be allocated to the dental service needs of the deciduous teeth. The plan for correcting defects in the deciduous teeth should be the same as that adopted for correcting defects in the permanent teeth. Deciduous teeth of children aged 2 will have accumulated the least number of defects, children aged 3 will be next in order, and so on throughout the age scale when deciduous teeth are present.

If this plan is carried through, the excess funds referred to will be those derived from a gradual reduction of the reservoir of neglected defects which give rise to those service needs classed as emergency or replacement. Under our present methods of reducing or controlling the hazards to dental health, the final goal would be attained when the dental service needs of relief clients have been re-

duced to only those needs accruing annually, and when the loss of teeth or the need for extraction service has been reduced to a minimum.

Since it is a demonstrated fact that the best dental service is the least expensive - that is, early detection and care of defects to prevent tooth loss - it becomes an important concern of Welfare Boards that their clients do not allow dental defects to accumulate and increase in complexity. Therefore, Welfare Boards should be empowered, in so far as possible, to require that all clients submit themselves for at least an annual dental inspection and for such service as is indicated and certified according to an adopted plan. It is not sufficient that Welfare Boards allocate funds for the dental care of their clients. Facilities for making the contact between Welfare Board and clients in need of dental care are fully as important as funds. Since such funds should be expended in a manner which will insure the maximum dental health of beneficiaries, regulations demanding full cooperation by the beneficiaries seem necessary to the attainment of this objective.

VI. SUMMARY AND RECOMMENDATIONS

A. Records and Statistics

Data on dental services and costs, St. Louis County Welfare Board, July 1, 1939 - June 30, 1940, have been presented in detail according to type of service, relief area, order class, etc. The records from which these data were obtained were made largely for purposes of accounting. They were of little value for evaluation purposes.

Recommendation: 1. That the records of dental services and costs be further subclassified in order to facilitate appraisal of the dental care program.

a. Classify the recipients of dental care into age groups and indicate the volume, type and cost of dental services provided for persons in each age group of a given relief classification. A five year grouping of all ages below 35 and a ten year grouping of all ages above 35 would appear to be a sufficiently fine grouping.

b. Subclassify filling and extraction services for children below age 15 according to the type of teeth on which such service was performed, that is, deciduous or permanent.

2. Adopt a uniform dental examination record form. When properly executed this form should constitute an accurate and complete record of the dental condition of the client examined. Space for listing the specific dental services needed should be provided on this form.

B. Eligibility for Dental Care

The methods used for determining eligibility for medical and dental care have been presented in detail in the medical portion of this report. However, certification of eligibility for dental care does not imply that authorization for the needed dental services will be given. The present policy of providing filling services for children only is to be considered the basis of a working plan whereby the problem of eventually supplying adequate dental care for all dentally needy can be solved. If this plan is operating successfully, then the age span of those eligible for filling services will be increased at the beginning of each fiscal year.

Recommendation: 3. That all recipients of public assistance and all non-assistance cases certified as dentally needy be eligible for dental care according to an adopted plan. The plan should be so designed that the goal of providing adequate dental care for all dentally needy will be gradually attained at a minimum cost. To be successful in reaching this goal the cooperation of relief clients must be obtained. They must be encouraged to submit to regular dental inspection and service.

4. An annual dental examination of each relief client should not only be encouraged but should be required in so far as possible without resorting to legal compulsion.

C. Methods of Authorizing Dental Care

The present systems of authorizing dental care are cumbersome and undoubtedly operate to discourage application for dental service. Under the examiner system

used in Duluth, the client goes to the relief office for certification of eligibility, then to the family dentist for an examination and diagnosis, then to the examiner in Hearding Hospital for verification of the diagnosis and for authorization for dental services, back to the family dentist for services, and finally to the examiner again for a check on the services rendered. Under the non-examiner plan used on the Range, the client goes to the nearest relief office for certification of eligibility. It is not unusual for the medical director in charge, who is a nurse, to issue an order for specific dental services at the time of certification of eligibility. Further the distance to be travelled by the client to obtain the order is frequently great. Therefore, clients usually obtain the needed dental service in the city in which the relief office is located instead of returning to their home town dentist. These and other factors operated to produce some dissatisfaction with the dental care program on the Range. Most of the dentists interviewed requested that more professional direction, such as that provided under the examiner plan, be obtained for the Range.

Recommendation: 5. That all dentists be provided with a supply of dental examination forms and that the client go directly to the dentist for examination and diagnosis. Under this system of initiating dental care it would be necessary that all dentists volunteer to perform the examinations without charge. However, the plan should operate to encourage regular dental care and would place the responsibility for making dental diagnosis where it properly belongs -- in the hands of the dental profession.

Each completed dental examination record with the diagnosis and a list of dental services needed should be sent to the nearest welfare office for authorization. The dental director employed by the Welfare Board should be responsible for making the decisions with reference to authorization. He would be free to call in the client for verification of the diagnosis and to inspect dental services rendered. However, to eliminate cumbersome detail, such verification and inspection would not be a routine requirement for each client applying for or receiving dental

service.

6. That the dental director designate definite time periods when he will be in the Duluth office and also two or three half days a week when he will be in the Range offices for the specific purpose of reviewing dental examination records, authorizing dental services and supervising the dental care program.

Since authorization for dental services will be given according to an adopted plan, the need for service does not imply that such services will be authorized. For example, fillings for carious permanent teeth in a child aged 10 are very likely to be authorized, whereas fillings for carious teeth in an adult who has moderately advanced pyorrhea are not likely to be authorized. That the client may not understand the reasoning for this difference in authorization for services is evident.

7. That the detailed dental diagnosis not be made known to the client until authorization to perform the needed dental services is obtained.

D. Dental Services Provided

Although it is clear that a definite plan based on age must be adopted for providing dental services, justifiable exceptions must be anticipated and should be allowed. These exceptions should be restricted sufficiently to insure the progress of the adopted plan.

a. Fillings: Most of the dentists interviewed during the course of this survey expressed the view that some filling services should be authorized for the present adult population on relief. Since the average cost of an extraction was $1.06 and the average cost of a filling was only $1.65, it would appear that a definite economy would result in filling carious teeth of adults who have maintained a satisfactory complement of teeth.

Recommendation: 8. That fillings be allowed for adults on a restricted basis, the criterion for their authorization being a prognosis that the fillings will be

an important factor in preventing the need for replacement appliances.

b. Extractions: On the Range, where the non-examiner system is used, it is not uncommon that a welfare client is given an order for several extractions. The dentist to whom the order was presented sometimes found that no extractions were indicated. However, the client would request one of the following: 1. that the order be used by the dentist as a means of obtaining payment on back bills. 2. that the order be used for providing needed filling services. 3. that the teeth be extracted whether indicated or not. To eliminate these practices the Welfare Board issued an order making it necessary that the client obtain a physician's request that certain teeth be extracted. Many dentists resented this order because it implied that the physician was more capable of diagnosing the need for extraction service than the dentist.

9. That the order requiring that a physician certify the need for extractions be rescinded. The responsibility for authorizing extractions should rest with the dental director.

c. Dentures: Almost all the dentists interviewed believed that more full and partial dentures should be supplied, especially for young adults and employable persons. This view seems reasonable but a careful study of each case should be made. It is obvious that a liberal policy in supplying dentures would be costly and would seriously reduce the funds available for preventing the need for replacement services.

10. That the policy of supplying full and partial dentures be stringent but that dentures be supplied to those who through such service are made more employable or whose physical or mental health indicate the need.

E. Billing

a. Submitting Bills for Payment: Bills for dental services rendered were submitted with a great deal of irregularity. Inasmuch as

the funds available for the dental care of relief clients are limited, and since the scope of the plan for caring for dental needs is dependent on the size of the budget, it becomes necessary that the person responsible for the execution of the plan know the current expenditures for dental care.

Recommendation: 11. Require that all bills be submitted within 30 days after the services are rendered.

b. Notarization of Bills: Those dentists who infrequently rendered service for relief clients complained of the nuisance and expense of having small bills notarized.

12. That the Welfare Board provide free notarization services in all relief offices or that attempts be made to waive notarization of bills less than $5.00 in amount.

c. Vendor List: The publication of the vendor list with the amount of funds paid to each vendor is compelled by law. The publication of this list appears to serve no useful purpose. Although those vendors who render relatively large amounts of service are exposed to criticism, it must be remembered that the Welfare Board through its dental director is responsible for the authorization of services. Therefore, the fact that a vendor has a relatively large income from the Welfare Board does not constitute cause for criticism. Many factors, such as location of the dentist's office, may operate to produce these marked differences in the amount of service rendered for relief clients by individual dentists.

F. Fee Schedule

All dentists interviewed termed the fee schedule acceptable with one uniform exception - the fee for dentures is definitely too low. It was found that with the exception of the fee for dentures the fee schedule adopted by the State Relief Agency was being used.

Recommendation: 13. That the fee schedule recommended by the State Relief Agency be adopted in its entirety.

Although there was no particular criticism of the policy of having a lower fee schedule for children's dentistry than for dentistry for adults, the desirability of having separate schedules seems questionable. The reason given for having a lower fee schedule for children is "to encourage dentistry for children." Since the relief client is not aware of the fees paid by the Welfare Board it is not clear how a lower fee schedule for children will have this effect. In general, dental operations for children are more tedious and more time consuming than the same type of operations for adults, and therefore most dentists prefer to do dentistry for adults. Having a lower fee schedule for children's dentistry serves as an added inducement to exercise this preference and penalizes the dentist who specializes in children's dentistry. On a fee for service basis, where the time consumed in performing the service is an important factor, it would seem more logical to have a higher fee schedule for children's dentistry than for dentistry for adults. Having a lower fee schedule for children's dentistry has the serious consequence of perpetuating the erroneous belief that children's dentistry is less important than dentistry for adults.

14. That steps be taken to eliminate separate fee schedules for dentistry for adults and for dentistry for children and that a single fee schedule be adopted.

G. Supervision

The duties and responsibilities of the dental director employed by the St. Louis County Welfare Board have been stated in previous sections of this paper. They need not be repeated here to justify the next recommendation.

Recommendation: 15. That the present part time dental director be placed on a full time basis or that a part time dentist be employed as his assistant.

If dental services are to be requested at the most effective time it is obvious that a great deal of field work is necessary — dental health education,

visits to the home, establishing contact between client, Welfare Board and dentist, and so on. The amount of work of this character is unlimited and personnel to perform these tasks should be provided.

16. That a dental hygienist be employed to assist the dental director in carrying out the field work of the dental care program.

H. In Service Training

It would seem desirable to have all health services of the Welfare Board coordinated under one health director. If this can be done, in-service training in the dental aspects of health should be conducted by the dental director. Nurses and general case workers should be instructed in the specific objectives of the dental health program. Since their contact with welfare clients is frequent and intimate they should be asked to encourage annual dental examinations and regular dental service. They should actively cooperate and assist in performing the numerous tasks which arise in connection with efforts to improve the dental health of the population with which they are concerned.

Recommendation: 17. That all health services be coordinated and that in-service training in dental health under the direction of the dental director be provided.

VII. CONCLUSIONS

The dental care program of the St. Louis County Welfare Board is relatively new. Without knowledge of this fact an appreciation of certain administrative features of the present program is likely to be lost in a discussion of the many tasks remaining to be done. The Welfare clients, the Welfare Board and the dentists were uniformily satisfied with the present supervision of the program. Some of the important factors which accounted for this favorable attitude are: 1. The program has competent professional direction. 2. The dentists, through an advisory committee of three members of the County Society, advise and assist in formulating the policies of the program. 3. The administrative policies are clear cut and well de-

fined and are designed to facilitate understanding and to simplify administration.

From this sound beginning, the dental care program of St. Louis County is well fitted to expand into an organization qualified to complete the difficult job of providing adequate dental care for the dentally needy at a minimum cost. The perspective of those actively engaged in administering the program is excellent. They are the first to admit that the program is in its early developmental stages and that much work remains to be done.

Although the per capita expenditure for dental care compares very favorably with figures for other communities, it must be remembered that dental care programs in this country, in general, have suffered tremendously from gross neglect. Fear of the major difficulties which the job present has resulted in utter indifference to the problem of dental ill health by officials responsible for the public health. Administrators of the dental care program in St. Louis County must look forward to increasing the per capita expenditure for dental care by fourfold if the program is to gain the distinction of being termed successful.

GENERAL REFERENCES

1. Klein, Henry, Palmer, C. E., and Knutson, J. W.: Studies on Dental Caries.
I. Dental Status and Dental Needs of Elementary School Children.
Pub. Health Rep., 53:751 - 765, May 13, 1938.

2. Knutson, J. W., and Klein, Henry: Studies on Dental Caries.
IV. Tooth Mortality in Elementary School Children.
Pub. Health Rep., 53:1021 - 1032, June 24, 1938.

3. Sweet, Charles A.: Are Teeth Insurable?
Jour. A.D.A., 27:215 - 218, Feb., 1940.

4. Sandler, Henry C.: Insurance Of Children Against Caries.
Jour. A.D.A., 27:460 - 473, March 1940.

5. The Committee on Community Dental Service of the New York Tuberculosis and Health Association. Health Dentistry for the Community.

The University of Chicago Press, Chicago, Illinois. 1935.

6. Brekhus, P. J.: Your Teeth: Their Past, Present, and Probable Future. University of Minnesota Press, Minneapolis, Minnesota. 1941.

Dental and Medical Expenditures, St. Louis County Welfare Board (July 1, 1939-June 30, 1940)
Exclusive of General Administration, but Including Salary of Dental Director

Class of recipient	Average number of recipients per month	Dentistry			All medical (including dental)			Percent dental of all medical
		Total	Per Capita	Percent of total dental expenditures	Total	Per capita	Percent of total medical expenditures	
Relief groups								
Direct relief	13,212	$15,174.19	$1.15	45.6	$170,478.05	$12.90	39.3	8.9
Old Age Assistance	5,018	3,602.51	.72	10.8	98,950.24	19.72	22.8	3.6
Aid to dependent children	4,000	5,512.38	1.38	16.6	31,617.38	7.90	7.3	17.4
Aid to the blind	100	258.14	2.58	.8	5,216.36	52.16	1.2	4.9
Total, relief groups	22,330	$24,547.22	$1.10	73.8	$306,262.03	$13.71	70.6	8.0
Non-relief groups 1/								
Care of children		$ 666.28		2.0	$ 3,665.83		0.8	18.1
W.P.A. supplements		7,388.39		22.2	86,636.22		20.0	8.5
Medical only		469.43		1.4	33,020.00		7.6	1.4
Miscellaneous		186.06		.6	4,148.06		1.0	4.5
Total, non-relief groups		$ 8,710.16		26.2	$127,470.11		29.4	6.8
Total, relief and non-relief		$33,257.38		100.0	$433,732.14		100.0	7.7

1/ No regularly eligible persons in these groups. Hence population base is unknown and per capita costs cannot be calculated.

EXPLANATION OF TABLES

A. Definition of Terms and Methods of Estimation.

1. Medical Order - These services were paid by county relief medical order directly to the dentist who rendered the service

2. Grants - Cash grants paid to recipients of assistance for the purpose of paying their dentists for dental services. There is no certainty that all this money reached the dentists. The number of dental services procured for these monies were estimated using the average costs of specific services for the whole relief group as a basis.

3. Hearding Clinic - Costs of services rendered are only those represented by the salary ($900.00) which the Welfare Board pays the dental director. This salary was prorated according to the number of visits for each type of recipient and each branch. That this method of estimating the costs of the dental services dispensed at the Hearding dental clinic is of questionable accuracy is readily admitted.

4. Fillings - The number of services refer to the number of teeth filled.

B. Errors.

1. Table VII. "Medical Only." Central Duluth. Extractions: Number of services 4, costs $50.00. This is an obvious error which was made in the original machine tabulations.

2. Table IX. "Care of Children." Northern St. Louis County. New Dentures: Number of services 1, costs $3.00. This is an obvious error which was made in the original machine tabulations.

APPENDIX

STATE RELIEF AGENCY
St. Paul, Minn.

March 16, 1939

ALFRED W. LUECKE
Administrator

ADMINISTRATIVE LETTER

TO: All County Welfare Boards

SUBJECT: DENTAL CARE FOR RELIEF CLIENTS

1. The experience of a year's operation of medical service under the schedules and practices approved by this Agency in September, 1937, have been eminently satisfactory to client, taxpayer, and to the medical profession. It is believed that extension of this plan to include the dental profession will result in an improved dental service and will enhance the value of our health program. Uniformity of medical practices throughout the state has definitely proved its value, and it is anticipated that state-wide uniformity of dental practices will be equally valuable.

2. Dental care is recognized as an essential part of a health program in that a healthy mouth is essential to the maintenance of general health and the prevention of incapacitating diseases.

3. It is suggested that dental service to adults be confined to the elimination and reduction of dental and mouth diseases and reconstruction for health and rehabilitation. Since the children of today are the adults of tomorrow, it is felt that the logical approach to the reduction of dental diseases in the population is through adequate dental care for the child. The maintenance of dental health in childhood will be reflected in healthier mouths in adults, thus reducing dental diseases and costs, and adding to the efficiency of a health program. A lower fee scale for children has been allowed to encourage dental care in youth, which will reduce more expensive care in later years.

4. Counties not employing a dental examiner regularly will follow the following procedure: relief client requesting dental care will be referred to a dentist for diagnosis and estimate of cost. This estimate will be returned to relief office for approval or disapproval. Approval of estimate shall constitute authorization to proceed with the work.

5. The Minnesota State Dental Association has collaborated with the State Relief Agency to develop the attached plan in the interests of a uniform dental procedure and its acceptance and adoption is recommended to the counties.

Yours very truly,

STATE RELIEF AGENCY

ALFRED W. LUECKE
Administrator

SRA Form 200

APPENDIX

STATE RELIEF AGENCY
St. Paul, Minn.

[illegible]

[illegible]
Administrator

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Very truly yours,

STATE RELIEF AGENCY

[illegible]
Administrator

[illegible]

PLAN FOR PROVIDING DENTAL CARE TO
RELIEF CLIENTS IN THE STATE OF MINNESOTA

I. General Policies
II. Governing Bodies
   A. State Dental Advisory Committee to the State Relief Agency
   B. County Dental Advisory Committees to County Welfare Boards, or other political subdivisions providing dental care.

III. Plan
   A. EXAMINER PLAN - Cities of the first class - Minneapolis, St. Paul, Duluth.

      1. Eligibility and certification of relief clients for dental care.

      2. Authorization for examination.

      3. Dental examination.

      4. Application for authorization of specified services.

      5. Authorization for specified services.

      6. Rendering of dental service.

      7. Certification and completion of dental service.

      8. Billing - monthly statement for dental service rendered.

      9. Filing of records for statistical and research purposes.

   B. NON-EXAMINER PLAN - other communities.

      1. Eligibility and certification of relief clients for dental care.

      2. Authorization for examination.

      3. Dental examination.

      4. Application for authorization of specified services.

      5. Authorization for specified services.

      6. Rendering of dental service.

      7. Certification and completion of dental service.

      8. Billing - monthly statement for dental service rendered.

      9. Filing of records for statistical and research purposes.

IV. Fee Schedule
   A. Specifications

PART I

General Policy for Providing Dental Care to Clients of the State Relief Agency

I. Dental care shall be provided certified clients of the County Welfare Boards in the State of Minnesota.

II. This plan gives careful consideration to the needs of the people (with particular reference to children), the obligations to the taxpayer, and the interests of the health professions.

III. There shall be a complete exclusion of proprietary or profit-making agencies.

IV. All features of dental service in any method of dental practice shall be under the control of the dental profession, as no other body or individual is educationally equipped to exercise such control.

V. All legally licensed dentists of the state of Minnesota shall be eligible to serve under such regulations as may be adopted.

VI. All persons eligible to dental service shall be free to choose their dentist.

VII. The dentist shall have the right not to accept any patient whom, in his professional judgment, he should not serve.

VIII. The Code of Ethics of the Minnesota State Dental Association shall control all relationships between patient and dentist.

IX. It is recommended that alterations in rules and regulations governing procedures be first approved by members of the Dental Advisory Committee to the State Relief Agency.

X. Confidential Schedules. Fees for services are confidential and amounts may be entered on Dental Relief Orders after the client's signature has been obtained. This may prevent relief clients from asking for relief prices after his relief status has terminated.

Governing Bodies

1. It is anticipated that the Dental Advisory Committee to the State Relief Agency shall approve all general policies, rules and regulations governing procedures in providing dental care for clients of the State Relief Agencies.

2. The Dental Advisory Committee to the State Relief Agency shall consist of authorized representatives from the State Relief Agency and authorized representatives from the Minnesota State Dental Association.

3. It is further anticipated by the Dental Advisory Committee to the State Relief Agency that County dental advisory committees to County Relief Agencies be established and that these committees shall be composed of authorized representatives from county relief agencies together with representatives authorized by the dentists of each county.

4. In cases where townships or other political subdivisions supply dental care to relief clients, it is anticipated that similar dental advisory committees shall be established.

5. It is anticipated by the dental advisory committee of the State Relief Agency that the general policies and the rules and regulations governing procedures set down by them shall be adopted by each political subdivision of the state authorized to provide dental care.

PART III.

Plan

A. Examiner Plan - St. Paul, Minneapolis and Duluth

B. Non-Examiner Plan

1. The clients of the County Welfare Boards shall be referred to private dentists who shall render dental care under specific conditions.

2. All such persons eligible for such service shall have the privilege of selecting their own dentist. If they have no dentist, then such persons shall be referred to a dentist whose name shall be selected in rotation from a list of those dentists within the political subdivision.

3. The need for and kind of service necessary shall be determined by the dentist who shall submit an itemized statement as application for authorization to the authorized representative of the relief agency in the political subdivision.

4. All dentists who agree to render services to clients of the County Welfare Boards must agree to accept the fees for such services as shall be fixed by the dental advisory committee to the State Relief Agency in full payment of their service in any given case.

5. Dental care under the provisions of the rules and regulations set forth for providing such care shall be restricted to persons who are clients of the County Welfare Board and are so designated by the County Welfare Board.

RULES AND REGULATIONS GOVERNING PROCEDURE

In the interest of simplified administration and accounting as well as the provision of adequate dental care at low cost, a uniform procedure for authorization of dental care shall be established. This procedure shall not be in conflict with the following regulations:

1. Patients found to be in need of treatment shall choose the dentist of their own selection or if the patient has no choice, referrals will be made in alphabetical order taking under consideration the problem of distance.

2. A written request for a dental examination issued by the County Relief Agency and approved by the local County Agency shall constitute authorization for a dental examination.

3. Dental examinations shall be made and recorded in triplicate. For purposes of statistical records and research, copies of all applications and copies of authorizations shall be available to the advisory committee to the State Relief Agency.

4. Approval by the local county agency shall constitute authorization for the dentist to render such specific service. Authorization for dental service shall be limited to such work as is specifically indicated in the written requisition which shall not be valid for more than 60 days from the date of authorization.

5. Authorization must be duly approved by the county agency in accordance with the rules and regulations of the state agency.

6. Dental service not specified in the schedule of services constituted as emergency service shall be provided only after proper examination and authorized by the county agency in accordance with rules and regulations of the state agency.

7. Dental care under these rules and regulations shall be restricted to those extractions, fillings, treatment, repairs, and reconstructions which are necessary for the relief of pain and the correction of conditions which may endanger health or life or threaten some future disability that is preventable when dental care is sought. Prophylaxis shall not be authorized for esthetic reasons only. Prophylaxis shall be authorized in cases where patients suffer from diseases of the mouth such as pyorrhea, Vincent's stomatitis, marked gingivitis, etc., or when heavy collections of calculus endanger the health of the oral cavity. Prophylaxis where authorized, shall consist of thorough scaling and polishing of teeth.

Specifications

8. Denture specifications: Any standard base rubber, plain pink veneer and gold clad pin tooth, lingual and over arch bars and clasps of precious or suitable non-precious metal are to be used.

9. Authorization for necessary fillings shall require that an approved method be employed. All fillings shall be properly contoured and polished with the correct contact points and with grooves and cusps carved to occlusion. Both work and material shall conform to the highest standards (A.D.A.) and be subject to the inspection and approval of the advisory committee in instances of controversy.

SCHEDULE FOR ADULTS

1. Extractions

Average, including local anesthetic,	first tooth	$ 1.20
" " " "	each additional tooth	1.00
Surgical " " "	first tooth	3.00
" " " "	each additional tooth	1.00
Impaction " " "		8.00

2. Amalgam Fillings

1. Surface	1.20
2. "	2.40
3. "	3.60

3. Cement Fillings	1.20
4. Cement Base	1.00
5. Silicate Fillings	3.00

6. Full Dentures

Upper or lower	18.00
Upper and lower, each	18.00

7. Partial Dentures

Upper or lower (with clasps $3.00 each)	21.00
Upper and lower, each (" " " ")	21.00

8. Reline dentures

Upper and lower, each	9.00

9. Repair Dentures $3.00 -	8.00
10. General Anesthetic	3.00
11. Local Anesthetic	1.00
12. Emergency Treatment	1.00
13. Vincent's Treatment, per treatment	1.20

(Special drugs to be billed additional at cost)

14. Prophylaxis	1.80

15. X-rays

Single	1.00
Full mouth	5.00

16. Resetting loose bridge	3.00
17. " crown	2.00
18. " inlay	2.00
19. Examination and Diagnosis	2.00

(N.B.) Examination fee shall apply only where examination has been authorized but authorization for dental care is not issued.

Appendix (Continued)

SCHEDULE FOR CHILDREN
Under age 14

1. Extractions
   - Average, including local anesthetic, first tooth..... $1.00
   - " " " " each additional tooth..... 1.00
   - General anesthetic, first tooth..... 3.00
   - " " each additional tooth..... 1.00
2. Amalgam
   - 1. Surface..... 1.00
   - 2. Surface..... 2.00
   - 3. Surface..... 3.00
3. Cement fillings..... 1.00
4. Cement Base..... .60
5. Silicate Fillings..... 2.50
6. Emergency Treatment..... 1.00
7. Space Retainer..... 9.00
8. Prophylaxis..... 1.20
9. Examination and Diagnosis
   - (N.B.) Examination fee shall apply only where examination has been authorized but authorization for dental care is not issued.
10. Root canal - filling anterior teeth only..... 3.00

SPECIAL SERVICES

Special services, not covered above, may be authorized subject to the general restrictions imposed by regulations.

ST. LOUIS COUNTY WELFARE

TO: MEDICAL DIRECTORS

FROM: A. J. ERCHUL, EXECUTIVE SECRETARY

SUBJECT: DENTAL CODE

DATE: May 2, 1939

On April 25, 1939, the St. Louis County Welfare Board met with Doctors F. A. Amundson, W. E. Mentzer, and A. W. Garvey in regard to the Dental Code which has been set up by the State Relief Agency in accord with the State Dental Society.

Effective immediately the St. Louis County Welfare Board will adopt the said Dental Code. Further, a new system will be outlined for the Dental Service to be given under the Supervision of Dr. Garvey. As soon as the complete procedure is outlined, copies will be forwarded to the Medical Directors.

It was a further decision of the County Welfare Board that in the treatment of deciduous teeth our dental program will be greatly liberalized. This will be further explained in Dr. Garvey's bulletin.

Regarding office procedure in the choice of vendor:
Client will have the choice of vendor; if no preference is shown, vendor list will be handed to the client for choice. If client is still unable to make his own choice, the medical clerk will write the order to the dentist whose name appears next in order on the alphabetical list to receive county dental work.

PLAN FOR DENTAL CARE
AS OUTLINED BY THE STATE RELIEF AGENCY
AND MINNESOTA DENTAL ASSOCIATION

To be followed out effective June 1, 1939

I. All children of school age eligible. (Instead of age limit of 14, according to schedule, about 19 years of age.)

II. No patient shall be sent to a dentist for examination unless eligible for dental work.

III. Fillings for temporary teeth shall be allowed - 9 years old or under.

IV. All children to be sent to dentist for examination, then referred to Hearding Hospital for check on examination. Also recheck after completion of work. (In cases of emergency extractions, children are to be sent to their own dentist immediately for relief of pain.)

V. No space retainers for children will be allowed.

VI. Extractions for adults shall be limited to emergency extractions only, and sent to their own dentist immediately. No patient shall be allowed over two emergency extractions. Emergency extractions are those for the relief of pain.

VII. General anesthesia shall be given only when absolutely necessary, upon request of dentist. (Not request of patient.)

VIII. All x-ray work done in the Hearding Hospital.

IX. At no time promise patients replacements with dentures unless assured by Ordean Fund or Welfare Board.

X. The following cases are to be sent to the Hearding Hospital:

1. All Old Age Pension Cases.
2. All patients having written order from doctor of some systemic condition requiring removal of teeth.
3. All examinations of children for filling work.
4. All impaction extractions for x-ray and okay.
5. All Vincent treatments for number of treatments and okay.
6. Resetting of bridges and crowns and plate repairs for okay.

At no time should the patient be informed of the price schedule.

Special attention should be called to sending patients to dentists of their own choice. If they do not ask for their own dentist, the alphabetical list should be followed, except in sending patients any long distance from their own address in order to follow out the list. All offices will be furnished with alphabetical lists.

Table I. Dental Costs and Services for Direct Relief Clients by Type of Service, Order Class, Relief Area, and County Welfare Board, July 1, 1939 - June 30, 1940.

Type of Service	CENTRAL DULUTH								WESTERN DULUTH								SOUTHERN RURAL							
	Medical Order		Grants		Hearding Clinic		Totals		Medical Order		Grants		Hearding Clinic		Totals		Medical Order		Grants		Hearding Clinic		Totals	
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs
Extractions	731	805.05			705	260.72	1436	1065.77	597	641.05			231	86.91	828	727.96	77	82.90			62	23.81	139	106.71
Fillings	1707	2759.10					1707	2759.10	1429	2266.60					1429	2266.60	171	307.90					171	307.90
New Dentures	2	13.57					2	13.57	4	68.00					4	68.00								
Dentures Repaired	7	37.50					7	37.50	13	68.00					13	68.00	2	4.50					2	4.50
Prophylaxis	20	23.20					20	23.20	29	34.50					29	34.50	5	6.60					5	6.60
Anesthesia	217	293.00					217	293.00	66	126.00					66	126.00	9	18.00					9	18.00
X-ray	1	1.00			16	19.04	1	20.04	6	7.00			8	9.52	14	16.52	1	1.00			1	1.19	1	2.19
Surgery	3	28.00					3	28.00	2	13.00					2	13.00								
Hearding Clinic Treatments					22	26.18	22	26.18					7	8.33	7	8.33					1	1.19	1	1.19
Total Costs		3960.42				305.94		4266.36		3224.15				104.76		3328.91		420.90				26.19		447.09
Average Number of Eligible Persons							3,999								2,133								903	
Per Capita Cost		.99				.08		1.07		1.51				.05		1.56		.47				.03		.50

Type of Service	VIRGINIA						HIBBING						ELY						ST. LOUIS COUNTY							
	Medical Order		Grants		Totals		Medical Order		Grants		Totals		Medical Order		Grants		Totals		Medical Order		Grants		Hearding Clinic		Totals	
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs
Extractions	2669	2793.55			2669	2793.55	1246	1295.00			1246	1295.00	15	15.80			15	15.80	5335	5633.35			998	371.44	6333	6004.79
Fillings	1229	2019.50			1229	2019.50	291	502.20			291	502.20	7	11.40			7	11.40	4834	7866.70					4834	7866.70
New Dentures	5	55.00			5	55.00	2	30.00			2	30.00							13	166.57					13	166.57
Dentures Repaired	27	142.10			27	142.10	15	71.35			15	71.35							64	323.45					64	323.45
Prophylaxis	68	77.20			68	77.20	52	57.00			52	57.00							174	198.50					174	198.50
Anesthesia	7	14.00			7	14.00	7	16.00			7	16.00							306	467.00					306	467.00
X-ray	12	14.23			12	14.23	6	4.00			6	4.00							26	27.23			25	29.75	51	56.98
Surgery	1	2.50			1	2.50	4	11.00			4	11.00							10	54.50					10	54.50
Hearding Clinic Treatments																							30	35.70		
Total Costs		5118.08				5118.08		1986.55				1986.55		27.20				27.20		14737.30				436.89		15174.19
Average Number of Eligible Persons					3,811						2,184						182								13,212	
Per Capita Cost		1.34				1.34		.91				.91		.15				.15		1.12				.03		1.15

Table II. Dental Costs and Services for Old Age Assistance Case by Type of Service, Order Class, Relief Area, and County Welfare Board, July 1, 1939 - June 30, 1940.

Type of Service	CENTRAL DULUTH								WESTERN DULUTH								SOUTHERN RURAL							
	Medical Order		Grants		Hearding Clinic		Totals		Medical Order		Grants		Hearding Clinic		Totals		Medical Order		Grants		Hearding Clinic		Totals	
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs
Extractions	10	18.70	20	21.00	372	117.86	402	157.56	1	1.20	78	82.00	163	53.58	242	136.78	8	8.60	14	15.00	17	3.57	39	27.17
Fillings																								
New Dentures			63	1225.50			63	1225.50			24	464.00			24	464.00			20	452.00			20	452.00
Dentures Repaired			10	39.00			10	39.00			6	57.00			6	57.00			3	28.00			3	28.00
Prophylaxis																								
Anesthesia	2	4.00					2	4.00									1	2.00					1	2.00
X-ray	1	1.00			5	5.95	6	6.95					1	1.19	1	1.19								
Surgery																								
Hearding Clinic Treatments					7	8.33	7	8.33					6	7.14	6	7.14								
Total Costs		23.70		1285.50		132.14		1441.34		1.20		603.00		61.91		666.11		10.60		495.00		3.57		509.17
Average Number of Eligible Persons							1,891								828								555	
Per Capita Cost		.01		.68		.07		.76				.73		.07		.80		.02		.89		.01		.92

Type of Service	VIRGINIA						HIBBING						ELY						ST. LOUIS COUNTY							
	Medical Order		Grants		Totals		Medical Order		Grants		Totals		Medical Order		Grants		Totals		Medical Order		Grants		Hearding Clinic		Totals	
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs
Extractions	244	256.75			244	256.75	133	141.65	19	20.40	152	162.05	11	11.60			11	11.60	407	438.50	131	138.40	558	176.20	1096	753.10
Fillings																										
New Dentures			15	296.00	15	296.00	1	2.00	9	175.00	10	177.00			1	31.50	1	31.50	1	2.00	132	2614.00			133	2616.00
Dentures Repaired	1	4.50	1	18.00	2	22.50	1	3.00	1	6.30	2	9.30							2	7.50	21	148.30			23	155.80
Prophylaxis	10	11.00			10	11.00	4	4.00			4	4.00							14	15.00					14	15.00
Anesthesia							1	3.00			1	3.00							4	9.00					4	9.00
X-ray																			1	1.00			6	7.14	7	8.14
Surgery																										
Hearding Clinic Treatments					6	1.19																	13	15.47	13	15.47
Total Costs		272.25		314.00		587.44		153.65		201.70		355.35		11.60		31.50		43.10		473.00		2930.70		198.81		3602.51
Average Number of Eligible Persons					913						716						115									
Per Capita Cost		.30		.34		.64		.22		.28		.50		.10		.27		.37		.10		.58		.04		.72

Table III. Dental Costs and Services for Aid to Dependent Children, by Type of Service, Order Class, Relief Area, and Totals, for St. Louis County Welfare Board, July 1, 1939 - June 30, 1940.

Type of Service	SOUTHERN ST. LOUIS COUNTY								NORTHERN ST. LOUIS COUNTY								ST. LOUIS COUNTY							
	Medical Order		Grants		Hearding Clinic		Totals		Medical Order		Grants		Hearding Clinic		Totals		Medical Order		Grants		Hearding Clinic		Totals	
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs
Extractions	281	296.35			111	45.24	392	341.59	404	458.60			2	1.19	406	459.79	685	754.95			113	46.43	798	801.38
Fillings	1997	3472.70					1997	3472.70	638	1013.90					638	1013.90	2635	4486.60					2635	4486.60
New Dentures																								
Dentures Repaired	7	45.50					7	45.50	4	24.50					4	24.50	11	70.00					11	70.00
Prophylaxis	18	23.80					18	23.80	22	28.20					22	28.20	40	52.00					40	52.00
Anesthesia	29	56.00					29	56.00	2	5.00					2	5.00	31	61.00					31	61.00
X-ray	1	1.00			7	8.33	8	9.33	3	3.00					3	3.00	4	4.00			7	8.33	11	12.33
Surgery	2	22.50					2	22.50	2	3.00					2	3.00	4	25.50					4	25.50
Hearding Clinic Treatments					3	3.57	3	3.57													3	3.57	3	3.57
Total Costs		3917.85				57.14		3974.99		1536.20				1.19		1537.39		5454.05				58.33		5512.38
Average Number of Eligible Persons							2,098								1,902								4,000	
Per Capita Cost		1.87				.03		1.90		.81						.81		1.36				.02		1.38

Table IV. Dental Costs and Services for Aid to the Blind by Type of Service, Order Class, Relief Area, and Totals, for St. Louis County Welfare Board, July 1, 1939 - June 30, 1940.

Type of Service	SOUTHERN ST. LOUIS COUNTY								NORTHERN ST. LOUIS COUNTY								ST. LOUIS COUNTY							
	Medical Order		Grants		Hearding Clinic		Totals		Medical Order		Grants		Hearding Clinic		Totals		Medical Order		Grants		Hearding Clinic		Totals	
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs
Extractions	1	1.00	14	15.00	11	3.57	26	19.57									1	1.00	14	15.00	11	3.57	26	19.57
Fillings			4	7.00			4	7.00											4	7.00			4	7.00
New Dentures			8	207.00			8	207.00			1	16.00				16.00			9	223.00			9	223.00
Dentures Repaired			1	3.00			1	3.00											1	3.00			1	3.00
Prophylaxis																								
Anesthesia	1	2.00					1	2.00									1	2.00					1	2.00
X-ray																								
Surgery																								
Hearding Clinic Treatments					3	3.57	3	3.57													3	3.57	3	3.57
Total Costs		3.00		232.00		7.14		242.14				16.00				16.00		3.00		248.00		7.14		258.14
Average Number of Eligible Persons							69								31								100	
Per Capita Cost		.04		3.36		.11		3.51				.52				.52		.03		2.48		.07		2.58

Table V. Dental Costs and Services for all Relief Ass ance, by Type of Service, Order Class, Relief Area, and Totals, for St. Louis County Welfare Board, July 1, 1939 - June 30, 1940.

Type of Service	SOUTHERN ST. LOUIS COUNTY								NORTHERN ST. LOUIS COUNTY								ST. LOUIS COUNTY							
	Medical Order		Grants		Hearding Clinic		Totals		Medical Order		Grants		Hearding Clinic		Totals		Medical Order		Grants		Hearding Clinic		Totals	
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs
Extractions	1706	1854.85	126	133.00	1672	595.26	3504	2583.11	4722	4972.95	19	20.40	8	2.38	4749	4995.73	6428	6827.80	145	153.40	1680	597.64	8253	7578.84
Fillings	5304	8806.30	4	7.00			5308	8813.30	2165	3547.00					2165	3547.00	7469	12353.30	4	7.00			7473	12360.30
New Dentures	6	81.57	115	2348.50			121	2430.07	8	87.00	26	518.50			34	605.50	14	168.57	141	2867.00			155	3035.57
Dentures Repaired	29	155.50	20	127.00			49	282.50	48	245.45	2	24.30			50	269.75	77	400.95	22	151.30			99	552.25
Prophylaxis	72	88.10					72	88.10	156	177.40					156	177.40	228	265.50					228	265.50
Anesthesia	325	501.00					325	501.00	17	38.00					17	38.00	342	539.00					281	539.00
X-ray	10	11.00			38	45.22	48	56.22	21	21.23					21	21.23	31	32.23			38	45.22	69	77.45
Surgery	7	63.50					7	63.50	7	16.50					7	16.50	14	80.00					14	80.00
Hearding Clinic Treatments					49	58.31	49	58.31													49	58.31	49	58.31
Total Costs		11561.82				698.79		14876.11		9105.53		563.20		2.38		9671.11		20667.35				701.17		24547.22
Number of Eligible Persons							12,476								9,854								22,330	
Per Capita Cost		.93				.05		1.19		.92		.06				.98		.93				.03		1.10

Table VI. Dental Costs and Services for "WPA Supplement" Cases, by Type of Service, Order Class, Relief Area, and Totals for St. Louis County Welfare Board, July 1, 1939 - June 30, 1940.

Type of Service	CENTRAL DULUTH						WESTERN DULUTH						SOUTHERN RURAL						VIRGINIA		HIBBING		ELY		ST. LOUIS COUNTY					
	Medical Order		Hearding Clinic		Totals		Medical Order		Hearding Clinic		Totals		Medical Order		Hearding Clinic		Totals		Medical Order		Medical Order		Medical Order		Medical Order		Hearding Clinic		Totals	
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs
Extractions	223	246.10	138	45.24	361	291.34	361	371.15	75	33.34	436	404.49	83	91.40			83	91.40	622	650.70	407	433.10	2	2.20	1698	1794.65	213	78.58	1911	1873.23
Fillings	955	1631.50			955	1631.50	1001	1658.40			1001	1658.40	268	446.70			268	446.70	518	846.20	205	368.90			2947	4951.70			2947	4951.70
New Dentures							5	105.00			5	105.00							1	21.00	1	10.50			7	136.50			7	136.50
Dentures Repaired							2	7.00			2	7.00							5	40.00					7	47.00			7	47.00
Prophylaxis	19	20.00			19	20.00	19	21.40			19	21.40	4	4.80			4	4.80	44	63.60	10	10.00			96	119.80			96	119.80
Anesthesia	35	70.00			35	70.00	42	84.00			42	84.00	20	18.00			20	18.00	2	4.00	9	19.00			108	195.00			108	195.00
X-ray	1	2.00	1	1.19	2	3.19	2	2.00	5	5.95	7	7.95							6	10.00	2	6.00			11	20.00	6	7.14	17	27.14
Surgery	2	15.00			2	15.00	1	7.50			1	7.50							1	1.00	2	5.00			6	28.50			6	28.50
Hearding Clinic Treatments			6	7.14	6	7.14			2	2.38	2	2.38															8	9.52	8	9.52
Total Costs		1984.60		53.57		2038.17		2256.45		41.67		2298.12		560.90				560.90		1636.50		852.50		2.20		7293.15		95.24		7388.39

Table VII. Dental Costs and Services for "Medical Only" Cases, by Type of Service, Order Class, Relief Area, and Totals, for St. Louis County Welfare Board, July 1, 1939 - June 30, 1940.

Type of Service	CENTRAL DULUTH						WESTERN DULUTH						SOUTHERN RURAL						VIRGINIA		HIBBING		ELY		ST. LOUIS COUNTY					
	Medical Order		Hearding Clinic		Totals		Medical Order		Hearding Clinic		Totals		Medical Order		Hearding Clinic		Totals		Medical Order		Medical Order		Medical Order		Medical Order		Hearding Clinic		Totals	
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs
Extractions	4	50.00	132	47.63	136	97.63							2	2.20	2	1.19	4	3.39	141	147.10	26	25.59	25	26.00	196	249.70	136	50.01	332	299.71
Fillings																			42	73.40					42	73.40			42	73.40
New Dentures																														
Dentures Repaired																														
Prophylaxis																			4	4.80					4	4.80			4	4.80
Anesthesia																			2	5.00	1	2.00			3	7.00			3	7.00
X-ray			2	2.38	2	2.38																					2	2.38	2	2.38
Surgery																			1	3.00	2	72.00			3	75.00			3	75.00
Hearding Clinic Treatments			3	3.57	3	3.57																					3	3.57	3	3.57
Total Costs		50.00		53.58		103.58								2.20		1.19		3.39		233.30		99.59		26.00		409.90		55.96		465.86

Table VIII. Dental Costs and Services for "Miscellaneous" Cases, by Type of Service, Order Class, Relief Area, and Totals, for St. Louis County Welfare Board, July 1, 1939 - June 30, 1940.

Type of Service	CENTRAL DULUTH						WESTERN DULUTH						SOUTHERN RURAL						VIRGINIA		HIBBING		ELY		ST. LOUIS COUNTY					
	Medical Order		Hearding Clinic		Totals		Medical Order		Hearding Clinic		Totals		Medical Order		Hearding Clinic		Totals		Medical Order		Medical Order		Medical Order		Medical Order		Hearding Clinic		Totals	
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs
Extractions	2	2.20	29	23.81	31	26.01	8	8.40	30	9.52	38	17.92	20	20.00	19	3.57	39	23.57	10	10.40	19	19.80			59	60.80	78	36.90	137	97.70
Fillings	1	1.00			1	1.00	17	24.60			17	24.60	21	32.00			21	32.00	12	18.00					51	75.60			51	75.60
New Dentures																														
Dentures Repaired																														
Prophylaxis																														
Anesthesia							2	4.00			2	4.00	2	4.00			2	4.00							4	8.00			4	8.00
X-ray									1	1.19	1	1.19															1	1.19	1	1.19
Surgery																														
Hearding Clinic Treatments			4	4.76	4	4.76									2	2.38	2	2.38									6	7.14	6	7.14
Total Costs		3.20		28.57		31.77		37.00		10.71		47.71		56.00		5.95		61.95		28.40		19.80				144.40		45.23		189.63

Table IX. Dental Costs and Services for "Care of Children" Cases, by Type of Service, Order Class, Relief Area, and Totals, for St. Louis County Welfare Board, July 1, 1939 - June 30, 1940.

Type of Service	SOUTHERN ST. LOUIS COUNTY						NORTHERN ST. LOUIS COUNTY						ST. LOUIS COUNTY					
	Medical Order		Hearding Clinic		Totals		Medical Order		Hearding Clinic		Totals		Medical Order		Hearding Clinic		Totals	
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs
Extractions	43	44.00	2	1.19	45	45.19	39	62.50			39	62.50	82	106.50	2	1.19	84	107.69
Fillings	226	358.00			226	358.50	99	163.10			99	163.10	325	521.60			325	521.60
New Dentures							1	3.00			1	3.00	1	3.00			1	3.00
Dentures Repaired																		
Prophylaxis	10	10.20			10	10.20	4	4.60			4	4.60	14	14.80			14	14.80
Anesthesia	9	16.00			9	16.00							9	16.00			9	16.00
X-ray			1	1.19	1	1.19	2	2.00			2	2.00	2	2.00	1	1.19	3	3.19
Surgery																		
Hearding Clinic Treatments																		
Total Costs		428.70		2.38		431.08		235.20				235.20		663.90		2.38		666.28

Table X. Dental Costs and Services for all Non-Relief Groups by Type of Service, Order Class, Relief Area, and Totals, for St. Louis County Welfare Board, July 1, 1939 - June 30, 1940.

Type of Service	SOUTHERN ST. LOUIS COUNTY						NORTHERN ST. LOUIS COUNTY						ST. LOUIS COUNTY					
	Medical Order		Hearding Clinic		Totals		Medical Order		Hearding Clinic		Totals		Medical Order		Hearding Clinic		Totals	
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs
Extractions	746	835.45	427	165.49	1173	1000.94	1291	1377.39			1291	1377.39	2035	2211.65	429	166.68	2464	2378.33
Fillings	2489	4152.70			2489	4152.70	876	1469.60			876	1469.60	3365.	5622.30			3365	5622.30
New Dentures	5	105.00			5	105.00	3	34.50			3	34.50	8	139.50			8	139.50
Dentures Repaired	2	7.00			2	7.00	5	40.00			5	40.00	7	47.00			7	47.00
Prophylaxis	52	56.40			52	56.40	62	83.00			62	83.00	114	139.40			114	139.40
Anesthesia	110	196.00			110	196.00	14	30.00			14	30.00	124	226.00			124	226.00
X-ray	3	4.00	10	11.90	13	15.90	10	18.00			10	18.00	13	22.00	10	11.90	23	33.90
Surgery	3	22.50			3	22.50	6	81.00			6	81.00	9	103.50			9	103.50
Hearding Clinic Treatments			17	20.23	17	20.23									17	20.23	17	20.23
Total Costs		5379.05		197.62		5576.67		3133.49				3133.49		8511.35		198.81		8710.60

Table XI. Dental Services and Costs for all Recipients of an Non-relief Cases by Type of Service, Order Clerk Relief Area, and Totals, for St. Louis County Welfare Board, July 1, 1939 - June 30, 1940.

Type of Service	SOUTHERN ST. LOUIS COUNTY								NORTHERN ST. LOUIS COUNTY								ST. LOUIS COUNTY							
	Medical Order		Grants		Hearding Clinic		Totals		Medical Order		Grants		Hearding Clinic		Totals		Medical Order		Grants		Hearding Clinic		Totals	
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs
Extractions	2452	2690.30	126	133.00	2099	760.75	4677	3584.05	6011	6349.15	19	20.40	10	3.57	6040	6373.12	8463	9039.45	145	153.40	2109	764.32	10717	9957.17
Fillings	7793	12959.00	4	7.00			7797	12966.00	3041	5016.60					3041	5016.60	10834	17975.60	4	7.00			10838	17982.60
New Dentures	11	186.57	115	2348.50			126	2535.07	11	121.50	26	518.50			37	640.00	22	308.07	141	2867.00			163	3175.07
Dentures Repaired	31	162.50	20	127.00			51	289.50	53	285.45	2	21.30			55	309.75	84	447.95	22	151.30			106	599.25
Prophylaxis	124	144.50					124	144.50	218	260.40					218	260.40	342	404.90					342	404.90
Anesthesia	435	697.00					435	697.00	31	68.00					31	68.00	466	765.00					466	765.00
X-ray	13	15.00			48	57.12	61	72.12	31	39.23					31	39.23	44	54.23			48	57.12	92	111.35
Surgery	10	86.00					10	86.00	13	97.50					13	97.50	23	183.50					23	183.50
Hearding Clinic Treatments					66	78.54	66	78.54													66	78.54	66	78.54
Total Costs		16940.87		2615.50		896.41		20452.78		12237.83		563.20		3.57		12804.60		29178.70		3178.70		899.98		33257.38

Table XII. Dental Services and Costs by Type of Service, for Dental Care Provided by Private Social Agencies and Institutions, Duluth, July 1, 1939-June 30, 1940

Type of Service	United Jewish Charities		Ordean Fund		Community Fund		Family Service Society		Children's Home Society		Ladies' Aux. Dis.Dent.Soc.		Nopeming Sanatorium		Totals
	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	No.	Costs	
Extractions	1	$1.00	61		929		4	7.00			4	4.00	667		
Fillings			331 (5 Bridges, 14 Inlays, 4 Crowns)	1609.15	944								824		
New Dentures	5	78.00	92 cases	2466.05			8	174.20					25		
Dentures Repaired							3	29.00					6		
Prophylaxis									33	33.00			187		
Anesthesia															
X-ray					172										
Surgery															
Treatments			24		53								61		
Orthodontia			5 cases	550.00											
Salary - Dental Personnel													1980.00		
Supplies													1449.59		
Total Funds Expended		79.00		4625.20		1689.11		210.20		33.00		4.00	3429.59		10,070.10

Table XIII. Data on Number and Types of Dental Services, also Eligibility, Facilities, Dental Personnel, Salaries of Personnel, Costs of Supplies, and Totals by Urban Center, for Dental Services Provided by School Boards of St. Louis County, School Year 1939-1940

	Aurora	Biwavik	Buhl	Chisholm (1)	Duluth (2)	Ely	Eveleth	Gilbert	Hibbing (3)	Mountain Iron	Virginia (4)	Totals
Extractions (Permanent Teeth	0	7	22	4		13	25	12	161	14		258
Extractions (Deciduous Teeth	64	40	154	381		460	65	88	486	263		2001
Extractions, Permanent and Deciduous	64	47	176	385		473	90	100	647	277		2259
Fillings	320	94	691	1515		775	555	282	514	676		5422
Prophylaxis	150	5	370	655		447	25	415	63	536	3063	5729
Treatments	62	27	48	3		381	40	56	21	246		884
Eligible for Service	Kdgt.-6th gr.	1-6 grades	Kdgt.-8th gr.	Kdgt.-6th gr.	Kdgt.-8th gr.	Kdgt.-6th gr.	1st-8th gr.	Kdgt.-6th gr. (A)	1st-6th gr.	Kdgt.-6th gr. (B)	Kdgt.-8th gr.	
Eligible Population (Estimated)	150	105	370	655	9,000	447	797	415	Unknown	536	1021	
Location of Clinic	School	Own Office	School	School	School	School	School	Own Office	School	School	School	
Dental Personnel	1 Dentist 3 mornings a week for 10 months	1 Dentist-3 half days a week-9 months	1 Dentist-4 half days a week; 1 Dentist 2 half days a week; for 9 months.	1 Dentist full time	2 Dental Hygienists full time; 1 Dentist part time.	2 Dentists Part Time 9 months	6 Dentists half time each for a 6 weeks period	2 Dentists, 3 half days a week, each on alternate weeks.	1 Dentist full time	1 Dentist, half time for 12 mo.	1 Dental Hygienist; 1 Dentist full time.	
Salary of Dental Personnel	$1080.00	$675.00	$1575.00	$2700.00	$3092.00	$1800.00	$1800.00	$1400.00	$3575.00	$1800.00	$5105.00	$24602.00
Cost of Supplies (Exclusive of Equipment)			$150.00	$433.65		$83.83		$90.00	$150.00	$100.00		$1007.48

(1) Service Limited to Deciduous Teeth and First Permanent Molars
(2) Dental Examinations Only
(3) Service Limited to Certified Indigents or Relief Cases
(4) Examinations and Prophylaxis Only

(A) McKinley School Children Included
(B) Leonidas and Parkville School Children Included

On May 24, 1940, the St. Louis County Welfare Board requested Mr. Finke and Dr. Hilleboe to arrange with the U. S. Public Health Service, to conduct a study of the medical care program of St. Louis County.

Copies of the original report were prepared by members of the staff of the St. Louis County Welfare Board.

County Welfare Board

1940	1941
Thomas Shea, Chairman	Oliver Renstrom, Chairman
Oliver Renstrom, Vice-Chairman	George Elieff, Vice-Chairman
George Elieff, Commissioner	F. Rodney Paine, Commissioner

A. J. Erchul, Executive Secretary

On May 24, 1940, the St. Louis County Welfare Board requested Dr. Fines and Dr. Hilleboe to arrange with the U. S. Public Health Service, to conduct a study of the medical care program at St. Louis County.

Copies of the original report were prepared by members of the staff of the St. Louis County Welfare Board.

County Welfare Board

1940	1941
Thomas Shea, Chairman	Oliver Bonatyne, Chairman
Oliver Manatrea, Vice-Chairman	George Kilpatrick, Vice-Chairman
George Kilpatrick, Commissioner	F. Rodney Paine, Commissioner

A. J. Erchul, Executive Secretary